REVIEW ARTICLES

Joy Yueyue Zhang, *The Cosmopolitanization of Science: Stem Cell Governance in China,* London: Palgrave Macmillan, 2012, 232 pp.

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The Predicament of Theory: How *The Cosmopolitanization of Science: Stem Cell Governance in China* by Joy Yueyue Zhang Illustrates the Need for Advanced Groundwork for Cultural Studies

The Scope

This book is the product of an ongoing research endeavour that is remarkable in its own right: a *performative* response to some of the questions it raises. It demonstrates that a self-transcending cosmopolitan approach can be appropriate and constructive.

It does arouse some qualms, though, related less to the work itself than to its partly being an expression of the preliminary, perhaps immature, state of the scientific mainstream it represents, institutionally. It is fascinating to read here how a sociological framework, namely that of Beck's theory of cosmopolitanization, is at odds with its ambitions, as it fails to offer a conceptual language for assessing globalizing modernities, and thereby ultimately results in transcending itself.

Happily, this study provides evidence for the need to reconsider some current narrow disciplinary approaches without falling back into the

anachronisms of cultural relativism or cultural imperialism. This is done in light of a systematic building of a field of study that overcomes the dominant, but imaginatively impoverished, repertoire that is stuck between pointless comparatism, descriptive positivism or undue theory expansionism, in the quest to learn among global citizens about the mechanics, resources and orientations of social development when dealing with human biology.

The Author

Dr. Joy Yueyue Zhang is currently a Senior Lecturer in Sociology at the School of Social Policy, Sociology and Social Research, University of Kent, UK. She received her academic education in Beijing, Paris and London, blending clinical medicine, the social sciences and artistic tools with life as a global citizen. Her intellectual areas of enquiry include bioethics, risk assessment and sociology. From this interdisciplinary laboratory, she hopes to derive models for social intervention in the global village. She has identified the role of regulation as a research vector from which to study social change in response to technology-induced challenges for humanity. This reviewer has been closely acquainted with her work, especially during collaborations in the EU-China BIONET project (2006-2009: www.bionet-china.org) that coincides with her fieldwork for the book, which itself derives from her doctoral thesis.

What the Book Delivers

In summary, the book provides a trans-disciplinary readership with an original, detailed, nuanced and solid *empirical account* of a focus area in contemporary China. It uses the first decade of the development of a regulatory framework for good practice in stem cell research in China as a setting to explain emerging governance as *embedded* in multiple relational facets, in the context of its history and social transformation. It describes the internal mechanisms of China's *regulatory machinery* in transition, and thereby elucidates the heuristic merits of *problem-related exploration* in comparative and ethics studies. In particular, the focus on different actors' and institutions' dealings with uncertainty and risk in science, technology and society, and their interplay, proves to be of great informational and inspirational value. Here we learn about the persuasive role of therapeutic promises and mis-conceptions that drive part of stem cell research and related regulatory debates, not only in China, but conversely, in China as a function of a globalized bio-political economic ideology (Wahlberg et al. 2014).

The book focuses on a selected field of science as a microcosm, one that strings together specific patterns of significance for China's policy-making,

for science in China, for international operational and conceptual China-interrelations, for science as an economy, and for science and cosmopolitanization in general. In doing so, it draws an insightful and nuanced picture of the *scientific-regulatory micro-structures*, within their global significance and repercussions. One of the strengths of this thesis is that its narrative offers a self-explanatory case for the merits of integrated and grounded *methodology*. Perhaps it can even, as it claims, *chart the transformation* of Chinese science from an image of the 'Wild East' to a responsible or at least equal player in the international stem cell community. Hence it provides a powerful empirically supported *corrective to existing cosmopolitan frameworks* which are established mainly on Western data sources and cultural contexts.

What We Can Learn from this Book

Harking back to the start of her project, Zhang observes that "[we had] just started to realize that the 'international community' is not one monolithic authority, but rather a round table of various members, China is still a novice struggling to grasp the grammar of global communication" (Zhang: 105). This observation inspires a flashback: Where did the international scholarship stand, conceptually, in the debates and research on China's life science, including stem cells, governance and ethics, some 20 years ago? Among the international science and ethics communities at that time, there was no cosmopolitan spirit or accepted methodological, conceptual or normative reference for scientifically sound approaches crossing boundaries and borders. There was little awareness of the need to spell out a grammar of, nor acknowledgement of, shared humanity with this "novice," but there was multilateral relativism in abundance (Pohl and Müller 2002; compare Roetz 2006 and Nie 2011).

Also at that time, the emerging bioethics was confused and politicized, uncertain about its agenda, or about being metaphysical, ethical or political, moral or scientific (Döring 2006). It could be described as an emerging field of study, one at an early stage that may have gained practical, institutional, political and even normative authority prematurely. As one author has described it, "the state of the field was: fractured and poor, sciences in a mess" (Hennig 2006 and 2009). Even today, the Presidium of the Chinese Academy of Sciences admits a systemic failure of the country "to nurture a scientific spirit in the past," and urges scientists to help "safeguard scientific integrity and forge ahead for international excellence" (Xinhua 2014).

A generation ago, research policy and research support were informed and organized according to national *interests* and the existing level of *scholarship*. There were serious problems with *translational* work between cultures, post-Cold War rhetoric, and claims for dominance within the

"clashing" world at the "end of history" (according to Francis Fukuyama or Samuel Huntington) in bio-politics and bio-economics.

Examples to illustrate this state are many and pertain to all areas. They include: the meaning of "culture," the framework of "ethics," the methodology for inter-and trans-disciplinary science (Döring 2004), with no institution being up to the task (BIONET 2010). From within this muddled situation, some dedicated scholars took up the challenge of taking the long road to exploring, charting and transforming it into a fertile field for scientific and ethical work. Though no institution has yet been established, one of the resulting milestones is in the material substance of Zhang's book. In so far as this, it is a laudable and invaluable pioneering work.

Qualms

My qualms mainly concern the meta-theoretical approach adopted in the book, which I believe to be flawed and misleading, and which, in fact, is not even required here. However, looking at it can help us to discern a relevant problem for science (in relation to politics, society, the economy, and itself). The great *telos* or regulative ideal of humanistic science (*Wissenschaft*) is challenged by narrow culturally specific claims, vested interests and a general uncertainty regarding the overall meaning of science in our world—its conceptual foundations, ethics, organizational structures, and in particular its preparedness to respond to challenges from economic, political, moral or other non-scientific drivers of today's globalizing R&D civilization.

In this light, I find it overstated to describe this book as an "important contribution from the field of technology assessment to the topics of technology governance and global bioethics," as was claimed at an international congress on Technology Assessment that organised a special panel to discuss it (URL: http://www.pacitaproject.eu/?page_id=1958; download on June 15, 2013). It seems, rather soberly, to lay out the methodology and descriptive base that could then be tested as a candidate for an embedded approach to this multi-disciplinary task. *Assessment* could then be based upon this pioneering work, requiring several additional empirical studies and analyses, accordingly.

Another misleading and overblown expectation from the same context seems to be that, "This book demonstrates the feasibility, and implications, of a less advantaged country in influencing global research trends." I think that it doesn't have to, and really cannot, address such a political issue as if it were a political actor, and certainly not in this somewhat polemical style reminiscent of the late 1970s. Whether China was subscribing to a positive agenda of "influencing global research trends" seems irrelevant, and though one might find, *post-factum*, minor accidental influences, these could be found for other countries as well.

This is noted not as a nit-picky criticism, but as an example of a rhetorical moral undercurrent that seems to have been at work, reminiscent of what Ian Buruma once called the post-Colonial "Nanny State" syndrome, with reference to modern albeit perceived authoritarian Singapore (Buruma 2001). This spirit seems to be alien for the author, and misattributed as a description of this book. When she states, "I consider this to be the main contribution of this study to current debates on global scientific advancement," namely to demonstrate "the possibility and feasibility of less privileged countries acquiring effective leverage to shape the norm of global/local scientific exchange" (Zhang: 188), this is an example of an odd class-struggle lingo that seems out of place when contrasted with the brilliant and sober analysis she provides widely throughout the book. One wonders how this has come together.

On the other hand, the allusion to the "Nanny Syndrome," with its normative connotations, might easily have been inspired by her mentor's, Ulrich Beck, political creed, and which may have its validity elsewhere (e.g., Beck 2009). After all, it is Beck's conceptual heuristics, to pursue modernization trends in terms of a "cosmopolitanization," that Zhang puts to the test in this book. Here, it can explain both the polemical undertone and the silent, deadlocked confrontation that defies the foundation of scientific discourse, and which has actually been counter-productive to the development of ethics in East Asia. It reaffirms the juxtaposition of players, and the lack of a self-conscious, creative vision of one's own path as a scientist and responsible citizen. As Zhang shows, in performance and expressly, this is neither necessary nor helpful.

To be sure, progress in science and technology development, including the related social, ethical, philosophical and governance activities, cannot be assessed from within a pre-cosmopolitan/pre-globalization outlook, and certainly not with Colonial or Cold War mindsets, either, for it transcends the boundaries of state and legitimacy, embedding them in individual and transnational agents' interconnected activities. This is what the empirical material in Zhang's study seems to provide important evidence for, and the author expresses this quite clearly. So why get drawn into into such biased framing?

More generally, if we prefer to avoid frameworks that reiterate flawed descriptors, such as those of the Compass, namely "Eastern" versus "Western," or the "Clash of Civilizations," in reflecting ethics, and misattributions of agency, such as to quarreling "states" or "cultures," we can get rid of theoretical ballast and empirical misconstructions, opening up our discourse for the real world. Then, when taking Zhang's performative approach seriously, this works out even more powerfully, as it "contributes both to the empirical social study of science," and perhaps also "to current

theoretical debates on cosmopolitanization." From my point of view, it is justified and adequate to praise the book for what it actually is: a humble test case and limited exploration into the fabric of the genesis of a research culture, with the related theory and the intrinsic rationale of science.

A more far-reaching problem lies within the framing of the research question, one that is typical of the mainstream bioethics approach. Why *subscribe to the narrative*: why is it pointedly about *stem cell* governance in China, as if such an activity were some outlandish travelling circus calling for policing? And not, for instance, on the making of governance through the interplay of stem cell research, facing ethical, scientific and organizational questions? This is not a trivial difference. Implications for methodology and interpretative strategy are obvious. One can exercise greater humility regarding the proportion of claims to relevance of the life sciences and their governance as indicators of globalization processes when such claims are based on a deeply embedded cultural level. The observation that they were regarded as a "Sputnik opportunity," a historical chance to advance ahead of former Colonial powers, for Asian states , indicates the need for a pause for reflection rather than direct, affirmative action. This spirit of competition entered science in many countries, similarly.

As for China, such a pause would support reflection about general political transformation, and the building of communities in science, about stratifications in these processes and in society at large, providing reference points for ethical considerations and institutional analysis (Sleeboom-Faulkner 2013). Accordingly, it would then be easier to include the question of Chinese vulnerability to problematic effects of the import of state of the art knowledge and technology, without the related translational capacities required for making such transactions culturally adaptable and socially sustainable. However, the theme of stratification is not captured properly, despite the fact that this might be expected from Zhang's allusion to "the organization of cross-border solidarity" (Zhang: 189). As solidarity, this would go beyond the community and (elitist) strata of science, with their associated intellectual bias, and thus reflect the concerns in contexts of globalizing societies, equity and responsibility. There is room to hope that this line of enquiry will be taken up further.

Margins

This book makes a serious attempt to remind the research community of the need for an appropriate methodology. Zhang's preliminary analysis includes insights into the making of regulation in China. For instance, analysis of some fundamental problematic features in the Chinese regulatory approach, in particular *ad-hoc* pragmatism (50) and inappro-

priateness of scientific terms (54), which are recommended for closer scrutiny.

On the other hand, the role of the Communist Party remains unspecified. There are obvious obstacles to describing political decision-making that goes on behind closed doors in China. However, it remains a relevant target of research that could be expressly addressed, especially as it affects the matter of legitimacy of control over science and technology. Thus, should it be framed by narratives of "democratic," pragmatic or effective and just teleologies?

As to the author's claim that Chinese stakeholders have developed a cosmopolitan sensibility in comprehending and responding to ethical and regulatory concerns, evidently, progress towards a globalized, cosmopolitan science and technology assessment will include Chinese contributions. Naturally, they will incorporate scientific virtues together with fairness and equity regarding organizational, governance and ethical issues. However, intrinsically, this will not matter. What will matter are the *qualities* of the science, the ability of the Chinese educational system to support cosmopolitan scholars for the sake of best quality, the capability to provide the media for critical and educational discourse, etc. The strongest inhibitors of such a development appear to be narrow national or conceptual criteria of excellence and the mentioned pragmatism.

This goes for all of us, in any country. We do not have an explicit and shared vision of a viable global quality and culture. Nor is there an institutional base for a cosmopolitan stewardship, inspired by Beck's ideas. In fact, we are leaving the pro-active design of science to business dynamics and mega-structures such as the *Science* and *Nature* cartels. What about their integrity, credibility and quality? (cf. The DORA-initiative: *San Francisco Declaration on Research Assessment* URL: http://am.ascb.org/dora/files/sfdeclarationfinal.pdf, access June 25, 2014) These are global challenges for cosmopolitan science, for which the Chinese example makes a strong case.

Coming back to my qualms mentioned earlier, I believe that this important research and the wealth of materials and keen observations it offers is burdened with the theoretical assumptions in the particular rendition of cosmopolitanization it uses. Instead, it would benefit from a leaner theory that trusts to the self-explanatory capabilities of the chosen scientific approach and its underlying rationales.

Besides, the literature base is too thin to back up any general conclusions, with so much grey literature or conference contributions, sometimes bordering on the anecdotal or purely symbolic. Some relevant texts are not mentioned at all (see literature below). After all, the entire, much-

needed line of study is still at an early, pioneering stage. Mentioning this would have added to the merits of this work. However, this is not meant as a criticism of an author who dares to venture out on such a multi-disciplinary mission.

Prospects

This research pursues a promising course. As an exercise in multi-disciplinary grounded theory, it can make a contribution to the empirical and social-hermeneutic groundwork that is needed to enlighten scientific and ethical enquiry about humanity beyond mere technology assessment.

My initial cultural objection from the perspective on science as (systematic-holistic) *Wissenschaft* may encourage historians, theoreticians and philosophers of science who worry about the pragmaticization, reduction and even corruption of science and education. The all-corrupting trend in globalized science and ethics to compartmentalize, instrumentalize and alienate science for "high-level" or simply powerful interests is molding China as it has much of the world, "wasting" the most valuable assets of humanity (Macleod et al. 2014).

Such an injection of critique could open up a powerful cultural resource of epistemic and ethical humanism to benefit the advancement of Technology Assessment as an interface of the humanities, social sciences and the "hard sciences." It is in the best interest of scientists everywhere to build global quality alliances, to strengthen the sovereignty, authority and integrity of science against interventions from political, economic and other interests that are clever in degrading science as a mere instrument.

Obviously, it is easy to commend this book. But it should be recommended for the right reasons, for its strength, inspiration and incompleteness.

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